

D-desosamine

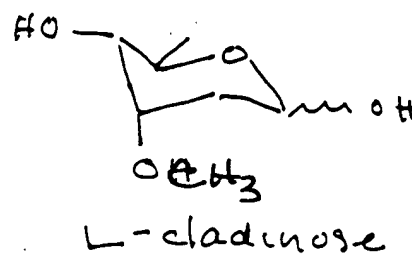
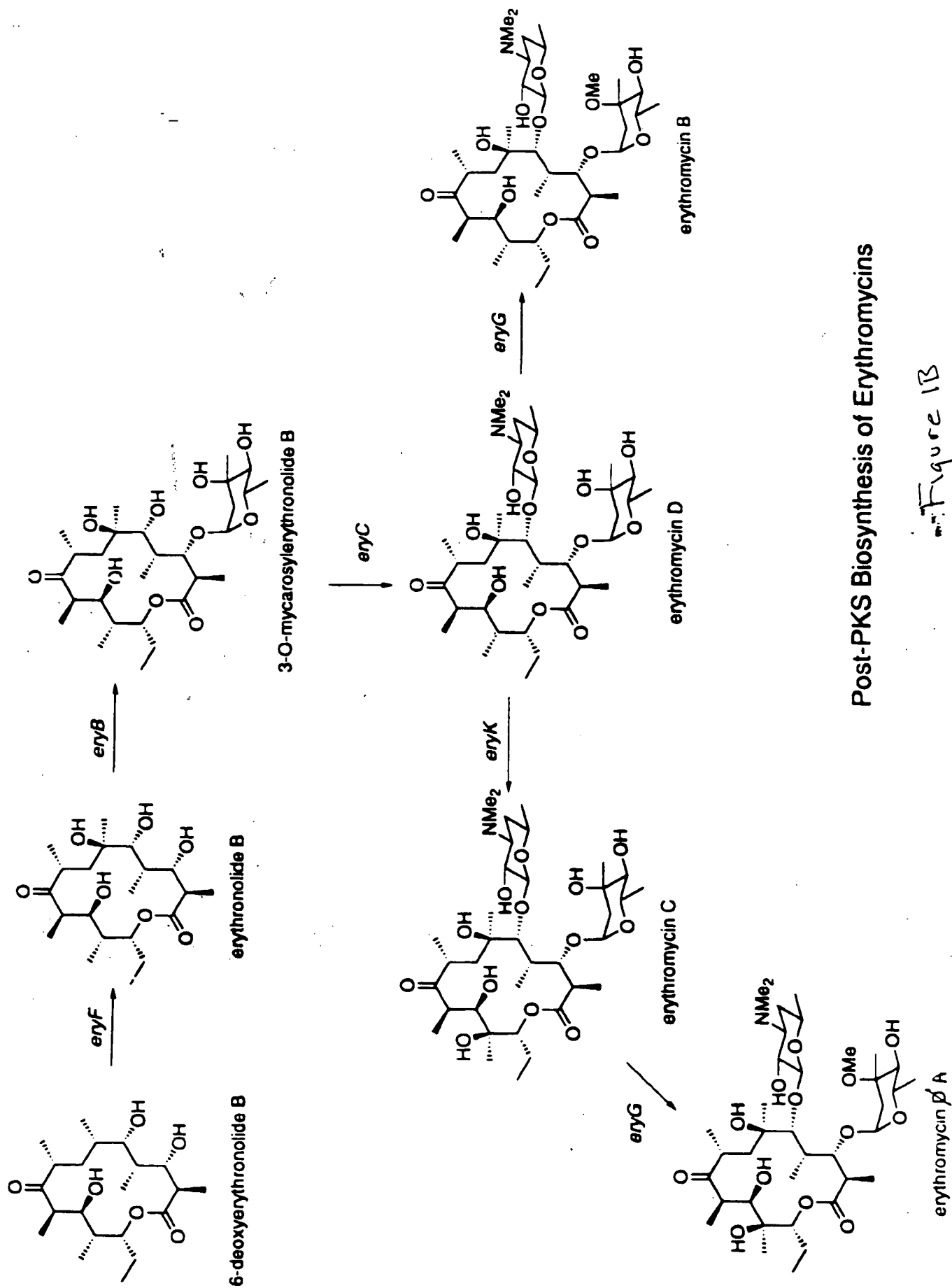


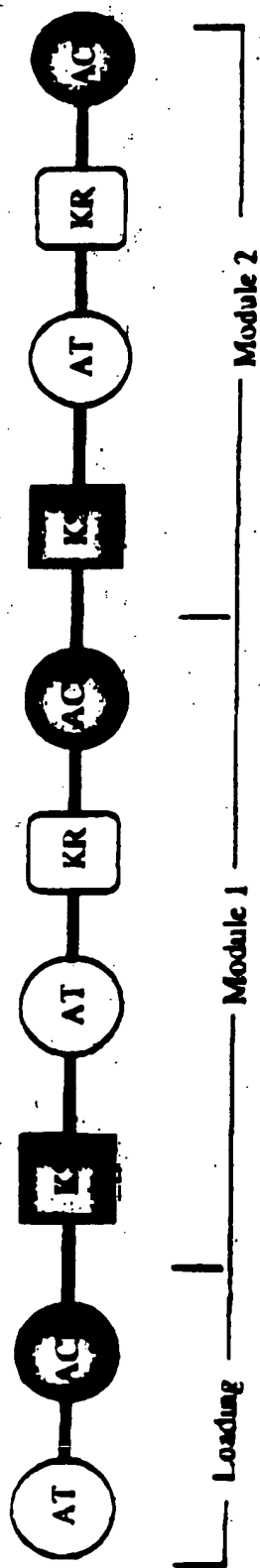
FIGURE 1A



Post-PKS Biosynthesis of Erythromycins

Figure 1B

DEBS1:



Generic Modular PKS

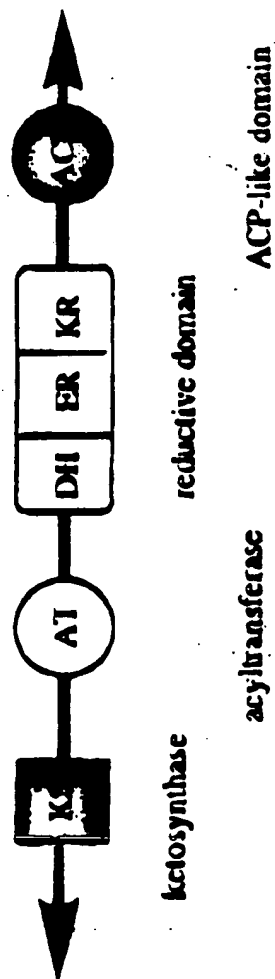


FIGURE 2

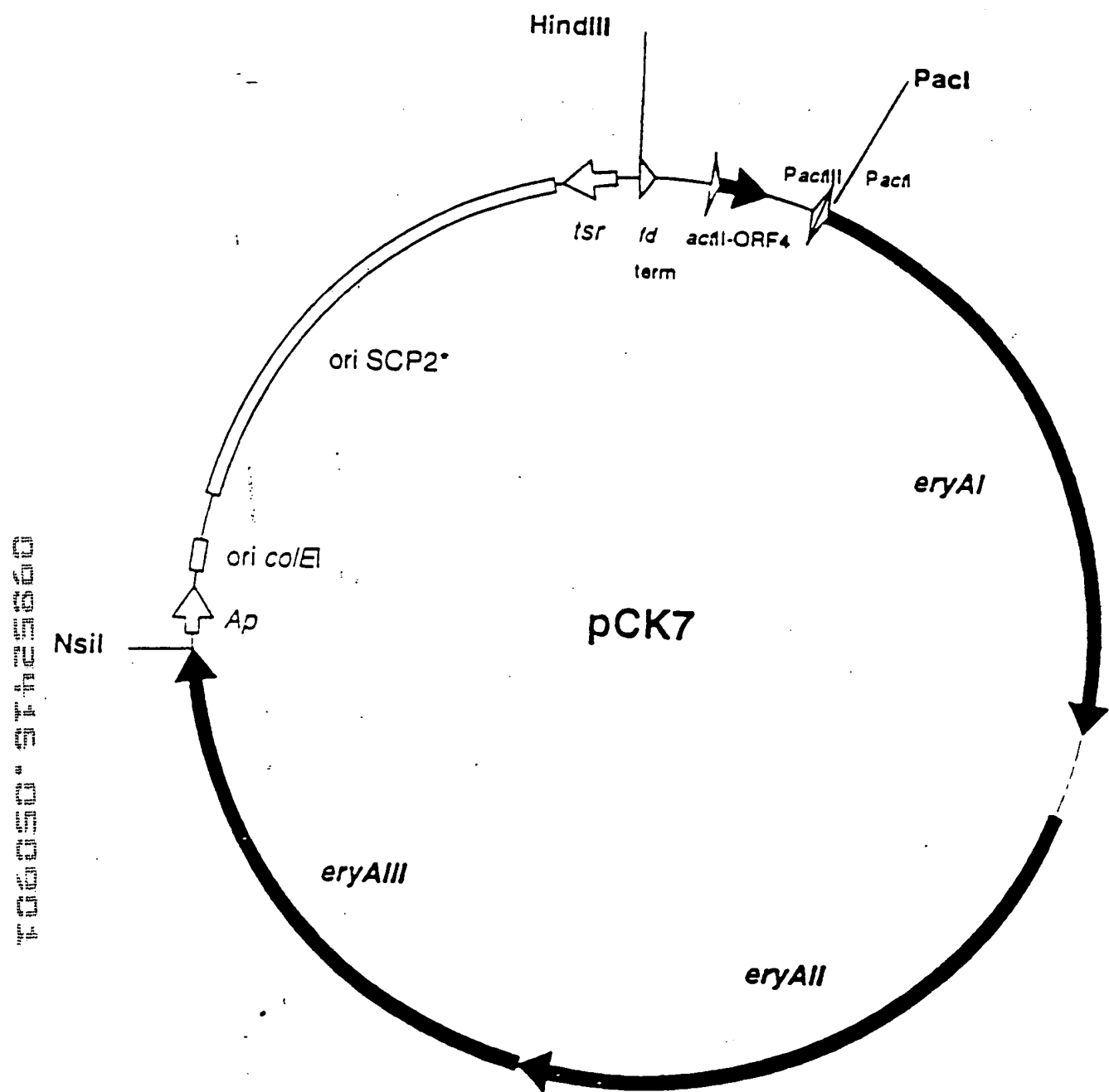
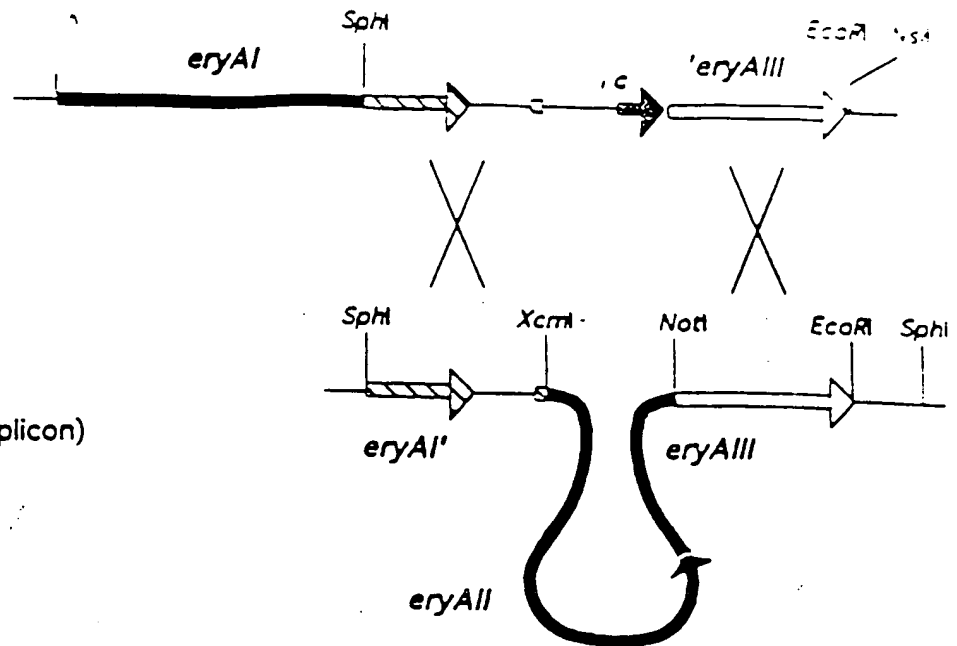


FIGURE 3

RECIPIENT: pCK5
(Ap^R, Tc^R)

DONOR: pCK6
(Cm^R, temperature-sensitive replicon)



Ap^R, Cm^R @ 30°C

Ap^R, Cm^R @ 44°C

Ap^R @ 30°C

Ap^R, Cm^S, Tc^S @ 44°C

FIGURE 4

Schematic representation of the genomic organization of the KOS011-77 gene. The diagram shows a linear map with various restriction enzyme sites (Pac I, Spe I, Bam HI, Pst I, Xba I, Bgl II, Eco RI) and labels for DEBS 1, DEBS 2, DEBS 3, and KOS011-77. The gene is flanked by Pac I sites, and the DEBS regions are indicated by arrows. The KOS011-77 region is indicated by a thick arrow.

Figure 5

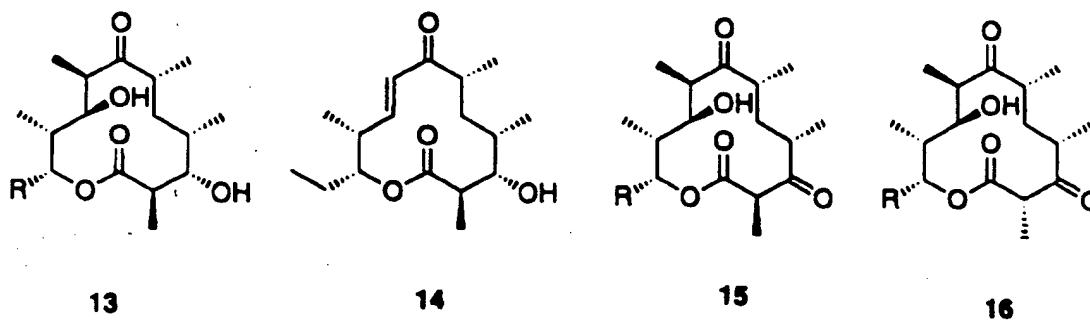
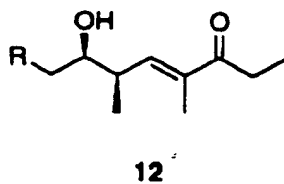
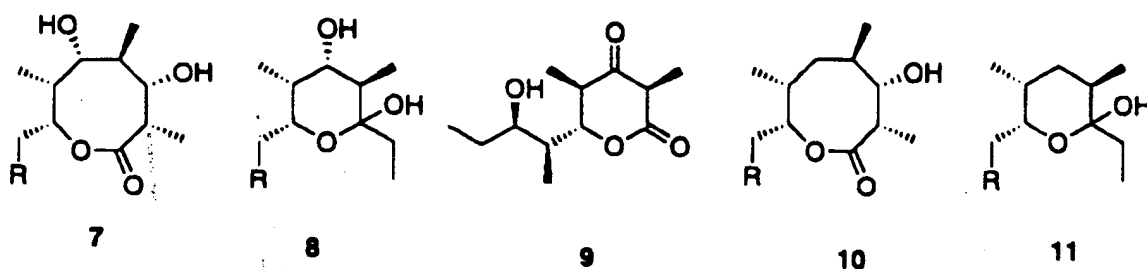
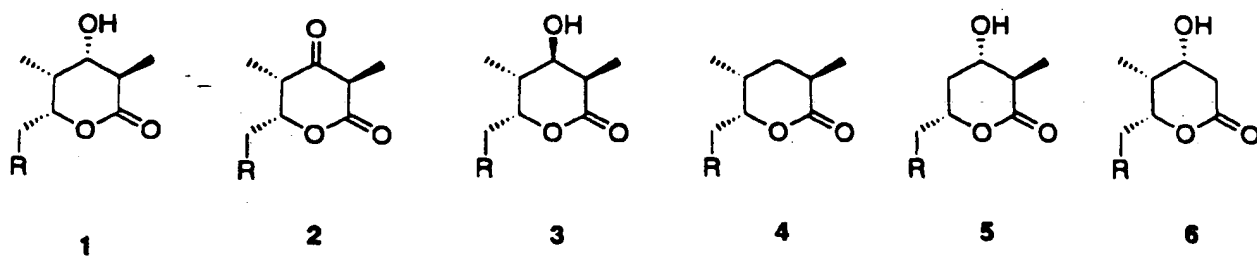


FIGURE 6A

DATE 24

000 70 100 45.3

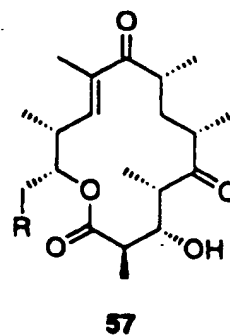
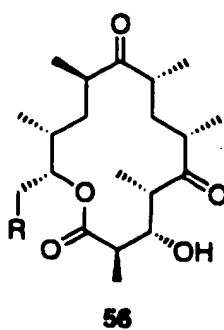
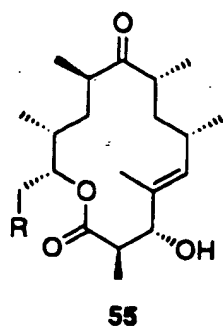
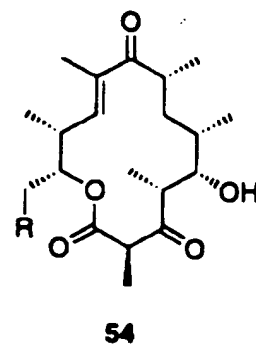
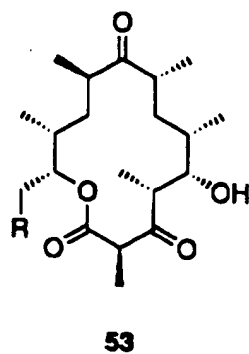
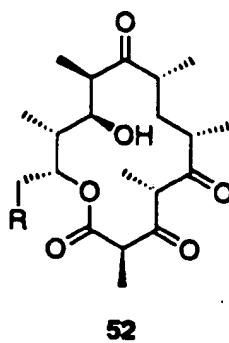
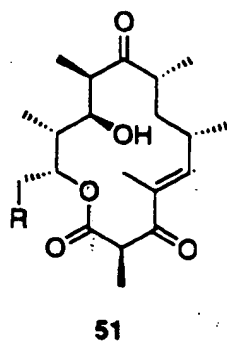
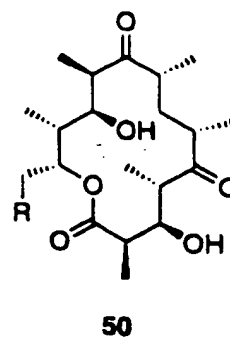
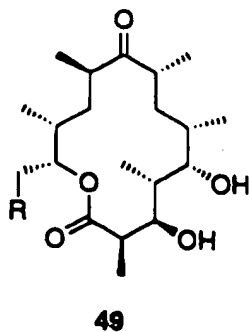
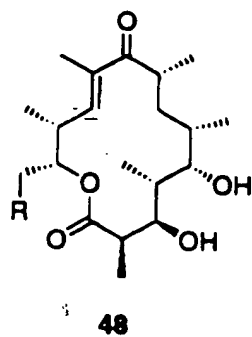


FIGURE 6D

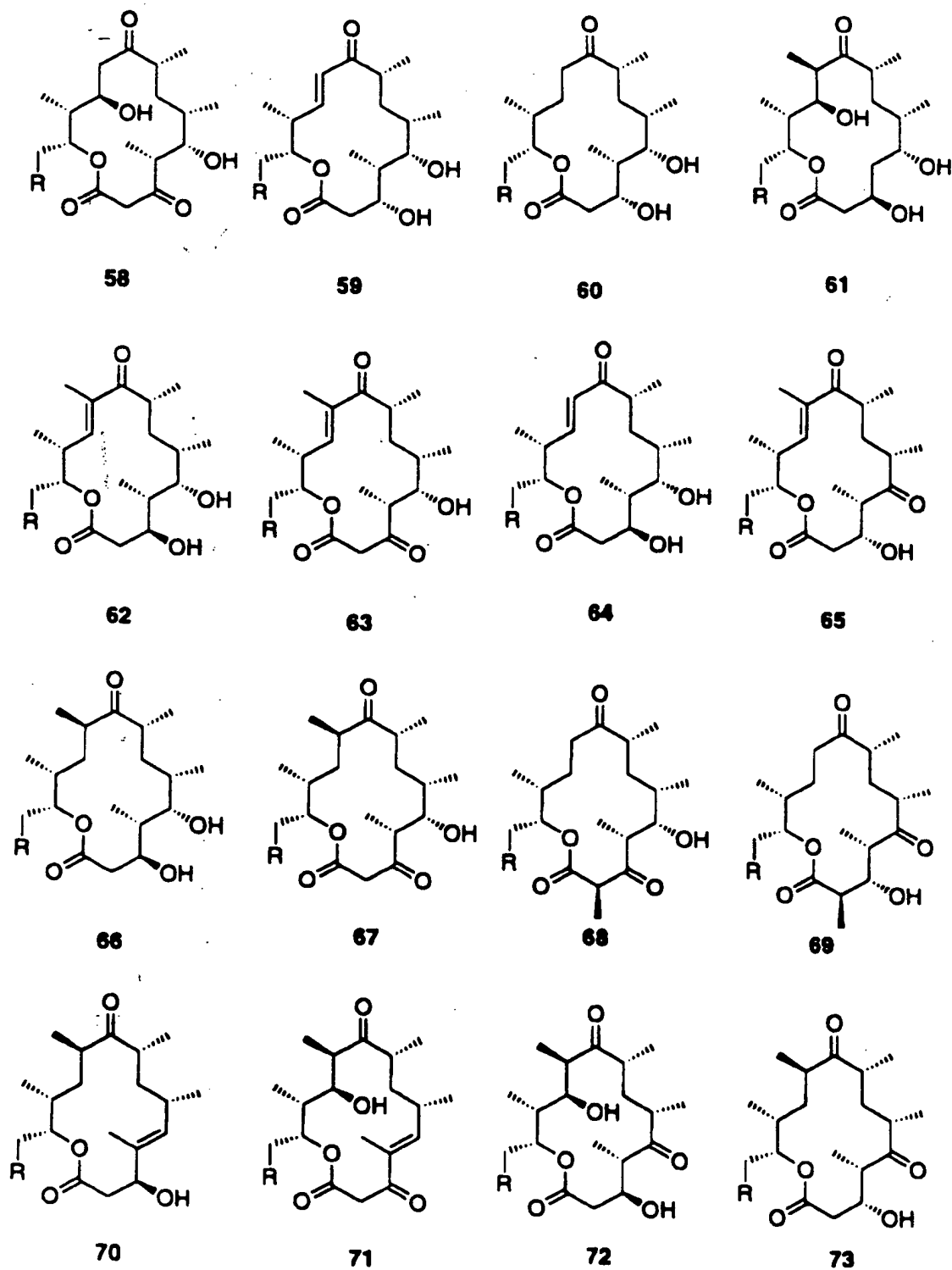


FIGURE 6E

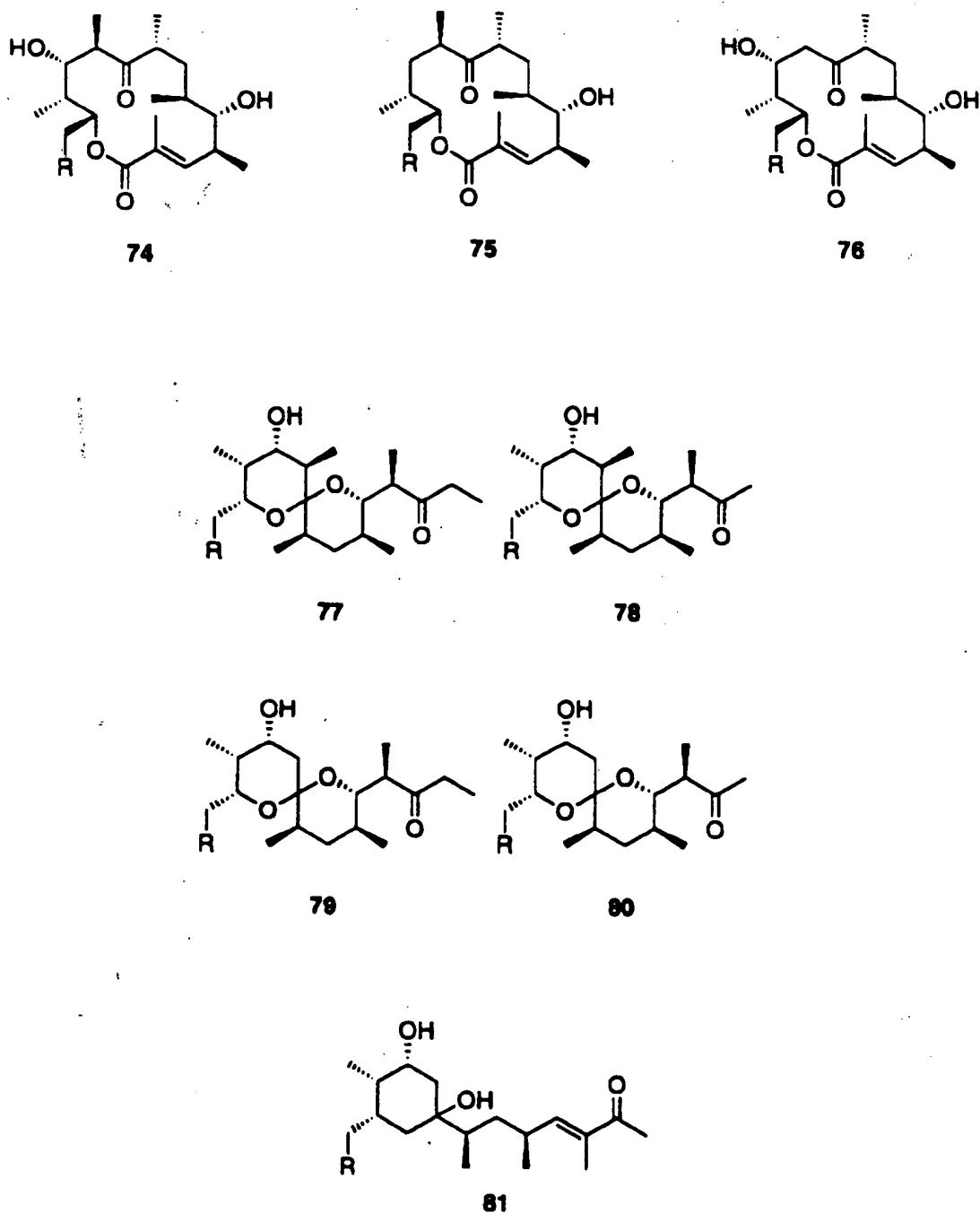
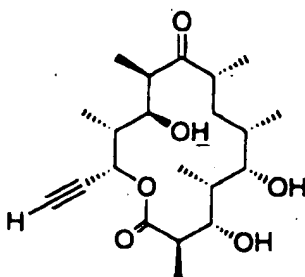
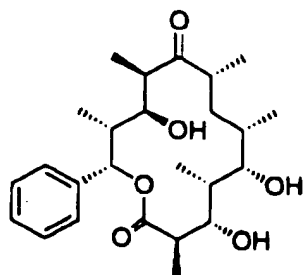


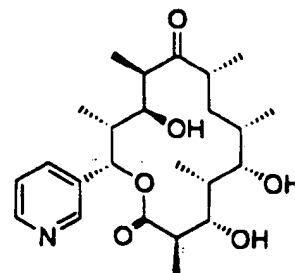
FIGURE 6F



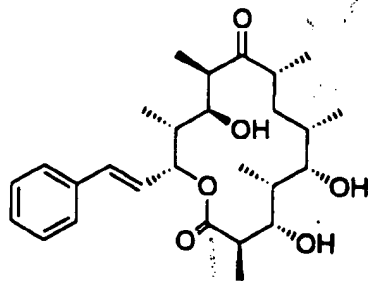
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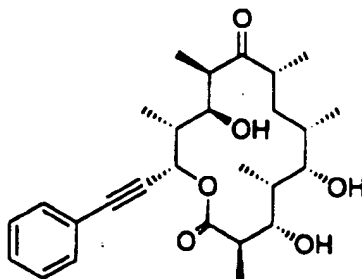
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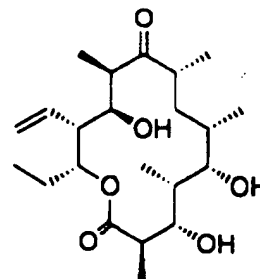
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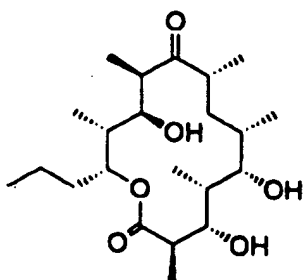
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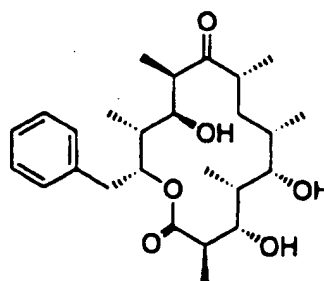
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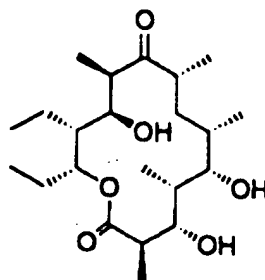
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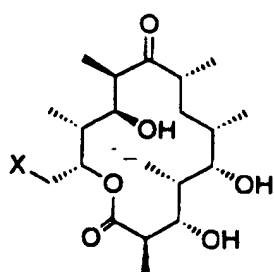


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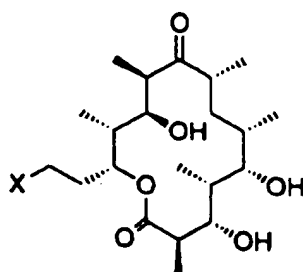


113

66

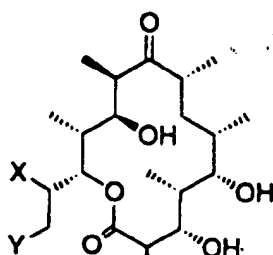


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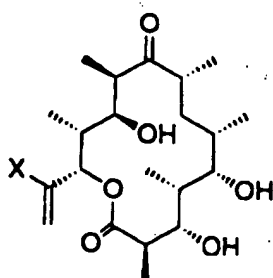
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X = F, Cl, Br, N₃, H, O-alkyl,
S-alkyl, CN, O-acyl, O-aryl,
NH₂, NH-alkyl, N(alkyl)₂



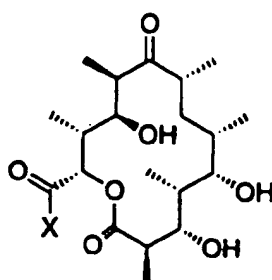
106

X = F; Y = H, Br, I, OH, O-alkyl, O-aryl, N₃, CN, S-alkyl, S-aryl
X = OH, Y = OH
X, Y = -O-, -NH-, -NR-



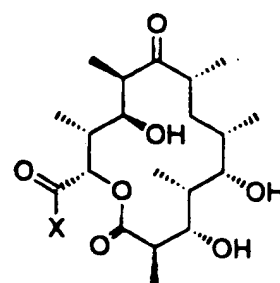
107

X = F, Cl, Br



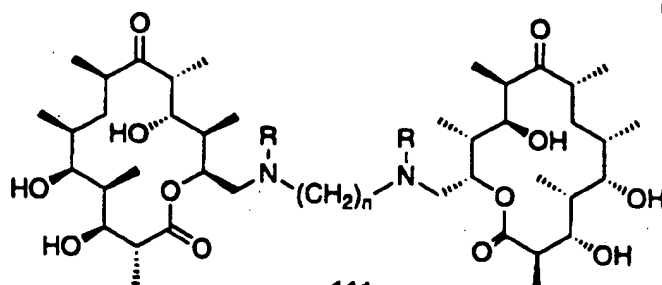
108: X=H

109: X=OH



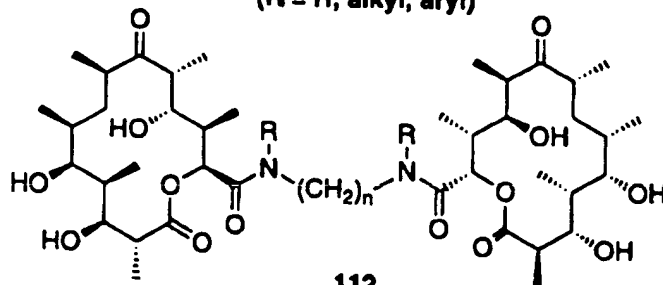
110

X = O-alkyl, O-aryl, NH₂,
NH-alkyl, N-(alkyl)₂,
NH-aryl



111

(R = H, alkyl, aryl)



112

(R = H, alkyl, aryl)

64

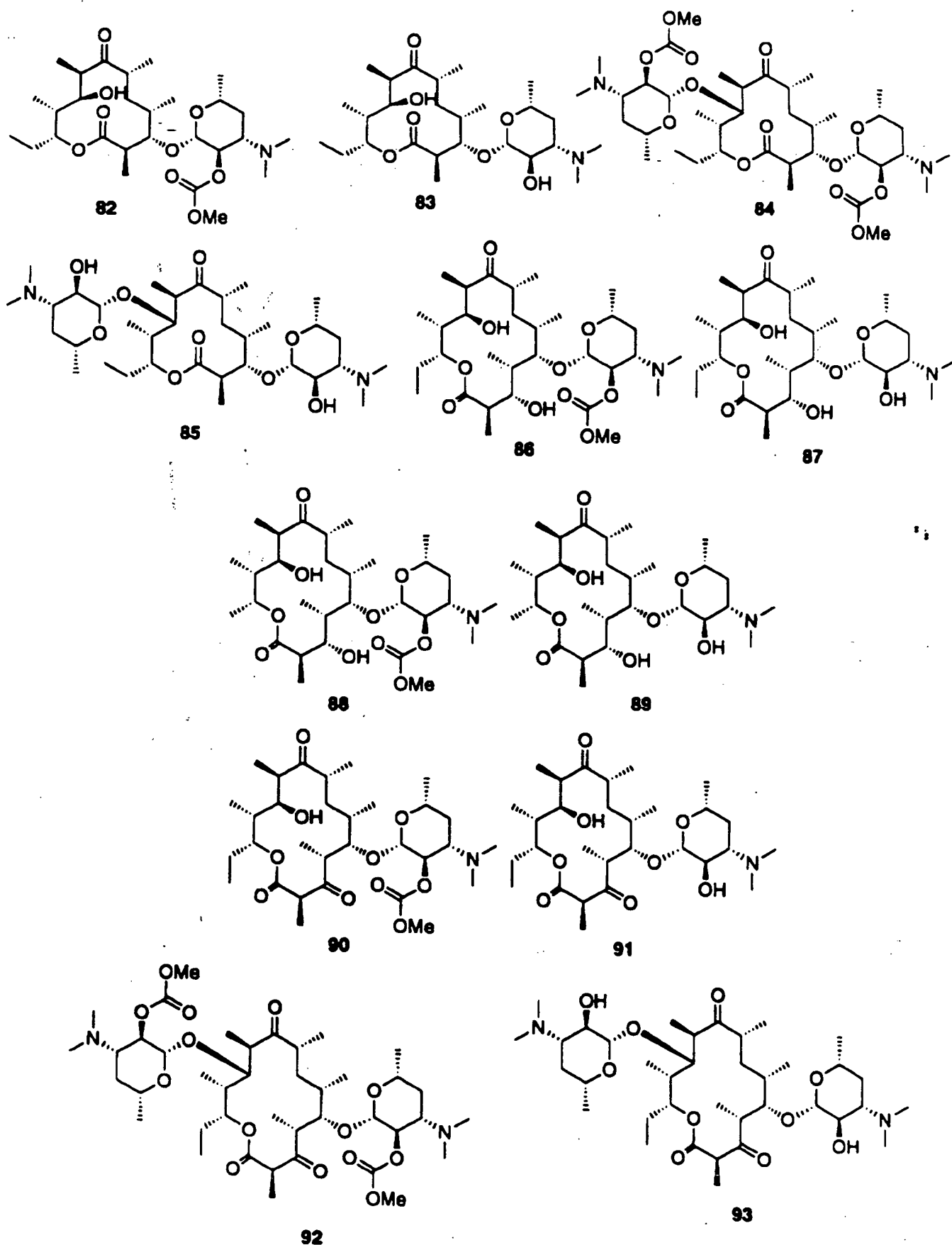
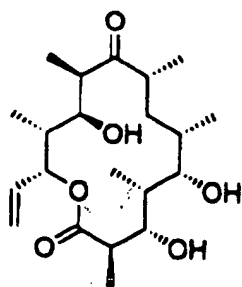
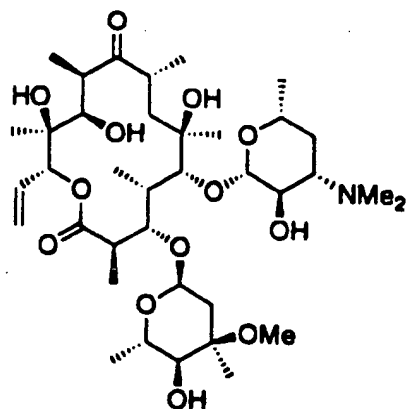


FIGURE 8

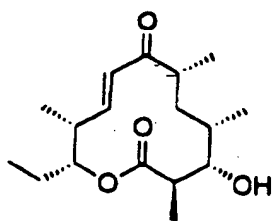


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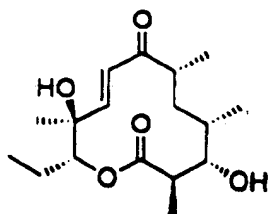
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FIGURE 9



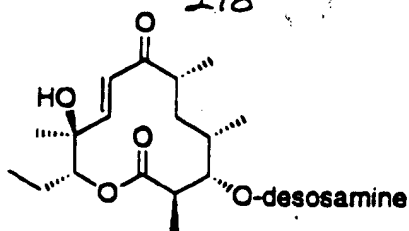
10-deoxymethynolide

210



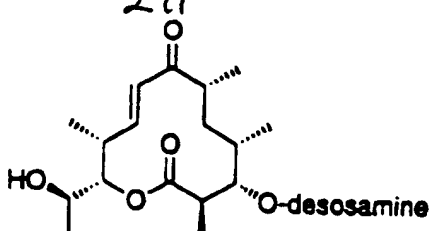
methynolide

211



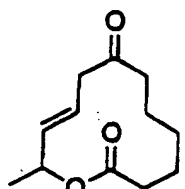
methymycin

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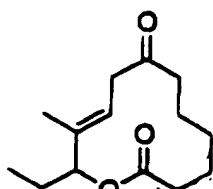


neomethymycin

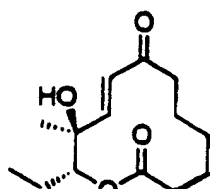
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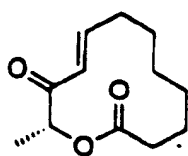
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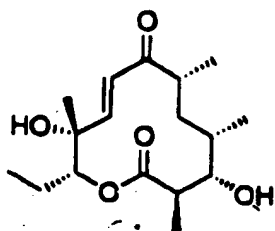
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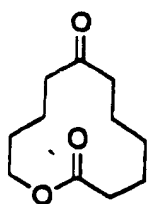


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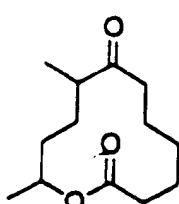


10-epi-methynolide

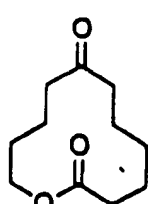
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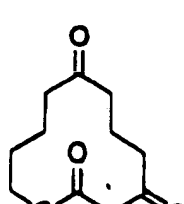
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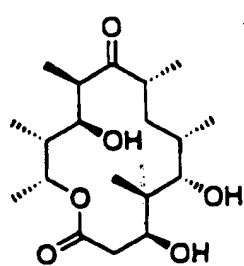
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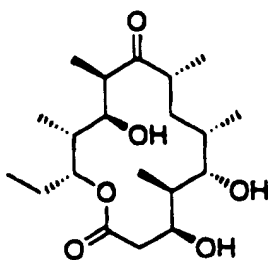
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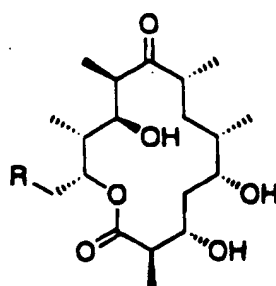
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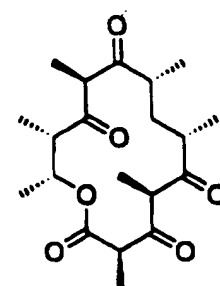
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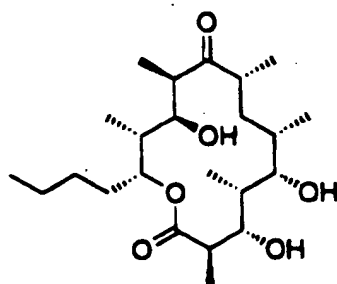
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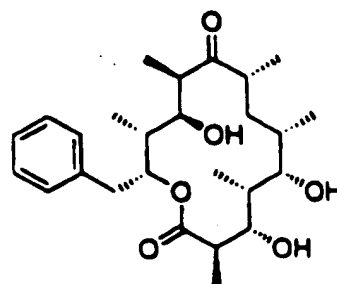
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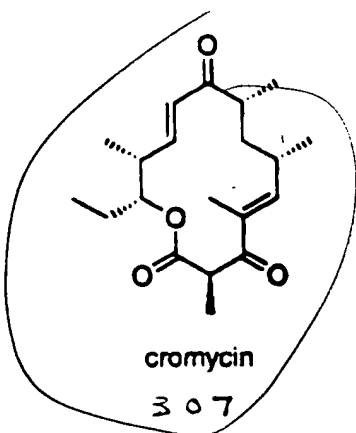
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305

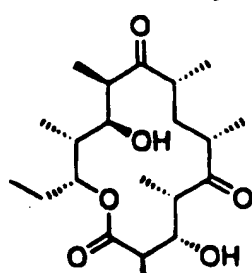


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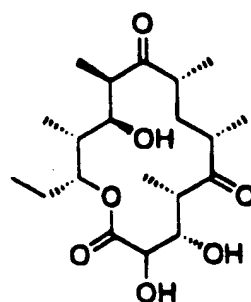


cromycin

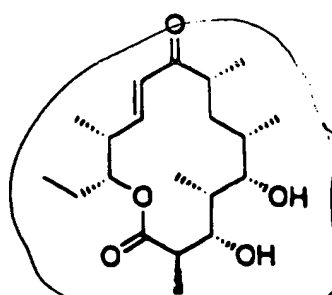
307



308
5-deoxy-5-oxo-6dEB

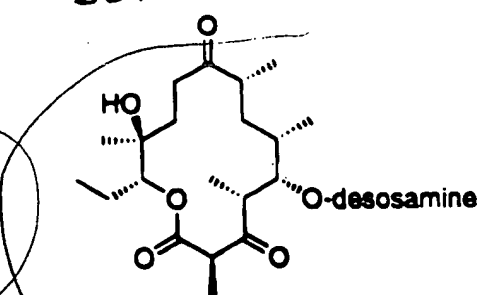


2-demethyl-2-hydroxy-
5-deoxy-5-oxo-6dEB
309



3-dihydroarbenolide

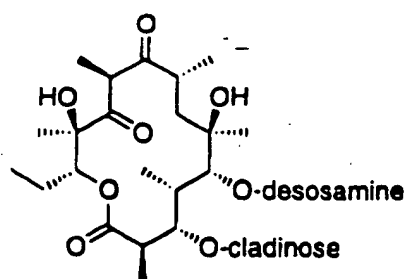
310



10,11-dihydropicromycin

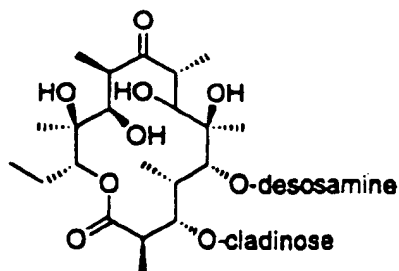
311

Figure 12 A



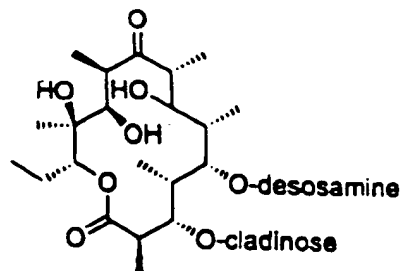
11-oxo-11-deoxyerythromycin A

312



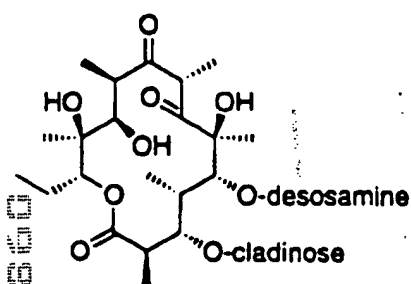
7-hydroxyerythromycin A

313



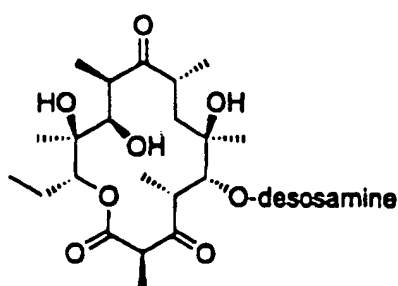
6-deoxy-7-hydroxyerythromycin A

314



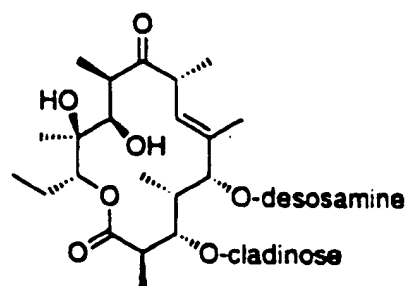
7-oxo-erythromycin A

315



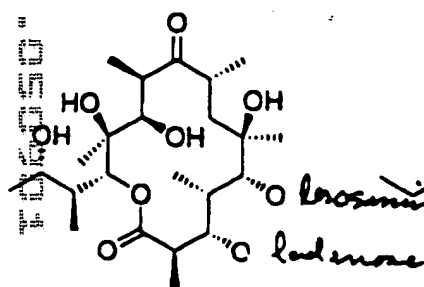
3-oxo-3-deoxy-5-desosaminyl-erythronolide A

316



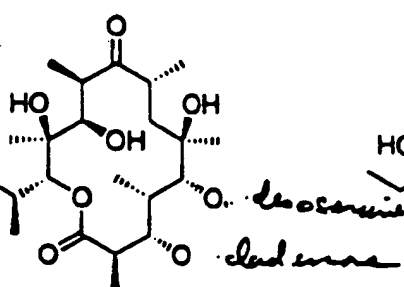
6,7-anhydro-erythromycin A

317



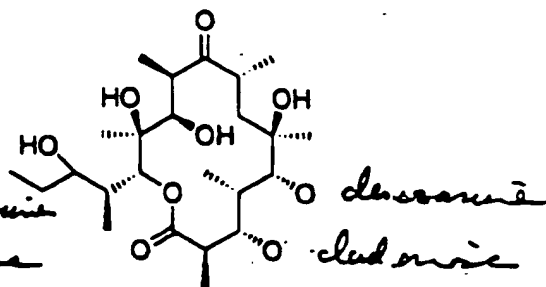
(14S,15S)-14-(1-hydroxyethyl)-erythromycin A

318



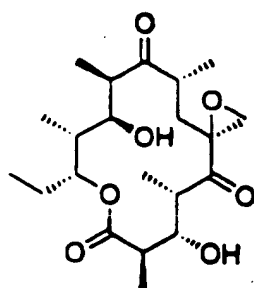
14-(1-propyl)erythromycin A

319



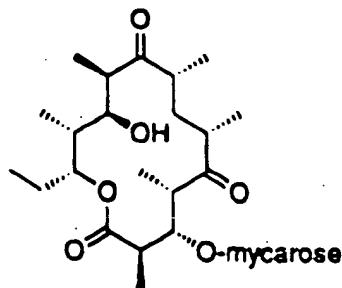
14-(1-hydroxypropyl)erythromycin A

320



5,6-dideoxy-6,6a-epoxy-5-oxo-erythronolide B

322



5,6-dideoxy-5-oxo-3-mycarosyl-erythronolide B

321